

CAMRA's Definition of Real Ale

What is beer?

Beer is produced from malted barley, yeast, water and nearly always with hops, although other ingredients such as wheat, oats, rye, fruit, honey, herbs, spices and flowers are sometimes used. The yeast ferments sugars generated from the malted barley into alcohol and carbon dioxide gas. Hops provide bitterness and characteristic aromas and tastes. The flavour of the beer depends on many things, including the types of malt and hops used, other ingredients and the yeast strain.

What is real ale?

In the early 1970s CAMRA coined the term 'real ale' for traditional draught cask beers to distinguish them from processed and highly carbonated beers being promoted by big brewers. Over the intervening 45 years, the term 'real ale' has been extended to encompass live beer in other formats.

CAMRA defines real ale as beer that is produced and stored in the traditional way, is unfiltered and unpasteurised, and ferments in the dispense container to produce a reduction in gravity

What is needed for fermentation in dispense containers?

Some brewers intentionally limit the amount of yeast in dispense containers to reduce settling time in the pub cellar and ease handling.

At least 0.1 million live yeast cells per millilitre of beer are needed to produce a normal amount of natural carbonation (for cask-conditioned beer around 2 grams of carbon dioxide per litre, or 1.1 volumes per volume).

There also needs to be enough fermentable sugar. As sugar is broken down by fermentation, the gravity of the beer drops. A drop of 1-2 degrees of specific gravity (for example, from 1008 to 1007 or 1006) over the life of a cask is enough to demonstrate that sufficient fermentation is occurring.

So in summary, to be classed as real ale, when beer is put into dispense containers it must contain at least 0.1 million cells of live yeast per millilitre and enough fermentable sugar for a drop of 1-2 degrees of gravity.

What is cask-conditioned beer?

Cask-conditioned beer is the most common and traditional form of real ale, most commonly served either by gravity (straight from the cask) or by handpump, although metered electric pumps can still be found, a few pubs in Scotland still use the traditional tall fount air pressure system and pubs are increasingly using systems which pump beer from the cask to taps on the pub wall. Dispense may be assisted by an additional pump between the cask and the bar to overcome potential issues with deep cellars or long beer lines. Additional pumps can be electric- or gas-powered with the most common form being the Flojet brand of gas-powered pump – although Flojets require a supply of compressed air or other gas, no gas comes in contact with the beer.



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What happens inside a cask of real ale?

Real ale finishes fermenting, conditioning and maturing in the container from which it is dispensed. For this to occur effectively, the beer must contain enough live yeast and fermentable sugar when it is put into dispense containers. Finings are often added to casks to encourage yeast settlement, enabling clear beer to be drawn from above the sediment; however, some brewers produce unfiltered real ales, which may be served hazy.

Casks are vented to atmospheric pressure in the temperature-controlled environment of a pub cellar (10-14 degrees Celsius). This allows some carbon dioxide gas from the fermentation to escape, while retaining a natural carbonation, or sparkle. The maturation process can help to develop more complex flavours and aromas that processed beers can rarely provide.

The shelf life of real ale, once on dispense, is limited to a few days. This is because of the ingress of air (specifically oxygen) into casks as beer is drawn off and the gradual loss of carbon dioxide from the beer. Over time the oxygen makes the beer start to taste stale and vinegary because of oxidation, and the loss of carbon dioxide makes the beer taste flat. Sometimes, to address these problems, especially in smaller or limited opening outlets or with beers of slower throughput, rather than being directly open to the air, the drawn-off beer can be replaced with carbon dioxide at atmospheric pressure using a device known as a cask breather or aspirator.

Can you get real ale in other containers?

Yes. Real ale in a bottle (RAIB) - bottled beer meeting our definition of real ale - is widely available; real ale in a can (RAIC) has recently made an appearance. CAMRA has an accreditation scheme for these beers available to all brewers producing them which is based upon laboratory testing. Accreditation will enable the 'CAMRA Says this is Real Ale' logo to be used.

Real ale is now also increasingly to be found in other, non-traditional containers. Real ale, unfiltered and unpasteurised, is put into kegs and smaller one-use containers now known generically as keykegs (although KeyKeg is a trade name belonging to Lightweight Containers BV who are the market leader, other brands are available). In keykegs, real ale continues to undergo secondary fermentation and is then dispensed by gas pressure (carbon dioxide or compressed air) being applied to the space between the outer and inner parts of the containers. Although this prevents the dispensing gas from coming into contact with the beer, it can result in the beer being over-carbonated compared to cask beer. A regime of frequent venting can alleviate this problem, but it is a major characteristic of the keykeg. However, not all beer dispensed from keykegs is real ale. CAMRA is introducing a labelling scheme to indicate which beers served from keykegs are real ale.

Unfiltered and unpasteurised beer put into kegs can continue to ferment in the container, unless fermentation has run its course during conditioning in the brewery. It is then invariably served using carbon dioxide pressure, which means that it no longer meets our definition of real ale.



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Why isn't all beer real?

The alternative to conditioning beer in the container from which it will be served is brewery-conditioning it – i.e. completing all fermentation and maturing in tanks at the brewery before it is packaged into casks, kegs, bottles or cans.

Further processing by micro-filtration and/or pasteurisation (heat treatment) can ensure there is no yeast left in the beer. Pasteurisation extends the shelf life of beer by killing bacteria but also kills remaining yeast in the beer ensuring no secondary fermentation in the dispense container. Filtered and pasteurised beers need no settling time in the pub cellar. Filtration and pasteurisation tend to remove much of the taste and aroma associated with real ale.

When CAMRA was formed, the vast majority of draught beer was either cask-conditioned or filtered and pasteurised making the differentiation between real ale and non-real ale clear. As processing the non-real ale meant there was no natural carbonation, beer was dispensed from sealed containers (kegs) with carbon dioxide forced into them and maintained by application of CO₂ during dispense. The 1980s saw the advent of the 'smoothflow' beer which added nitrogen to the dispense mix.

In recent years, many brewers are blurring the lines between real ale and non-real ale by conditioning their beers in tanks at the brewery but packaging them either totally unfiltered, with a coarse filtration that only removes the largest yeast particles or by using a device called a centrifuge which can remove yeast particles without removing smaller flavour giving proteins.

Ale and lager

There is a huge range of different beer styles, but each falls into one of two main categories - ale or lager.

Ales, which include bitters, milds, stouts, porters, barley wines, golden ales and old ales, use top-cropping yeast (*saccharomyces cerevisiae*). This forms a thick head, and the process is quite short, vigorous and carried out at higher temperatures than lager, typically 18-24 degrees centigrade. This is the traditional method of brewing British beer. Specialist yeasts, including wild yeasts, can be used to produce some styles.

Lagers are brewed with mostly very lightly kilned malt, which produces different flavour characteristics from the pale malt used in ales, specific varieties of hops and bottom-cropping yeast (*saccharomyces uvarum*). This does not form the thick yeast head associated with ale fermentations and fermentation takes place at a relatively low temperature (10-15 degrees centigrade). Authentic lagers then undergo a long period of cooled conditioning in tanks.

Beer styles

More details about the features of different beer styles are available in the CAMRA Beer Style Guidelines. These apply equally to real ales and other classes of beers.

